D1 series

Weighing/waterproof scales

User's guide

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SECTION 1 INTRODUCTION

The T28/T29 series of weighing/waterproof scales provides an accurate, fast and versatile series of general purpose waterproof weighing scales. There are 4 models of scales within the range. Platform size is 190mm x 230mm, capacity range from 3kg to 15kg.

All the keypads are sealed, color coded membrane switches and the displays are large easy to read liquid crystal type displays (LCD). The LCD's are optional with a backlight. The scale can have two displays(rear display is optional).

All units include tare, zero, change weighing unit.

SECTION 2 SPECIFICATIONS

T28/T29 SERIES			
Model #	**T28/T29-3**	**T28/T29-6**	**T28/T29-15**
Maximum Capacity	3kg	6kg	15kg
Readability	1g/0.5g	2g/1g	5g/2g
Resolution	1/3,000 or 1/6,000		
Tare range	3kg	6kg	10kg
Minimum Capacity	20g/10g	40g/20g	100g/40g
Platform size	190mm x 230mm		
Units of Measure	kg		
Optional function	Beeper, Backlight, stainless steel pan		

SECTION 3 INSTALLATION

3. 1 GENERAL INSTALLATION

The scales should be sited in a location that will not degrade the accuracy.

Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.

Avoid unsuitable tables. The tables or floor must be rigid and not vibrate. Do not place near vibrating machinery.

Avoid unstable power sources. Do not use near large users of electricity such as welding equipment or large motors.

Avoid high humidity that might cause condensation. Do not immerse the scales in water.

Avoid air movement such as from fans or opening doors. Do not place near open windows.

Keep the scales clean.

Do not stack material on the scales when they are not in use.

3.2 INSTALLATION of T28/T29 SERIES

T28/T29 series waterproof scales use AC adapter and rechargeable battery powered. Please attention the power source voltage accord with the mark of the adapter.
AC adapter socket at the bottom the scale, you can overturn the scale before you charging the battery.

SECTION 4 KEY DESCRIPTIONS

ON/OFF: turn on the power

TARE/UNIT：press this key to tare, hold this key for 4 seconds to change weighing unit

ZERO：rezero the scale.

SECTION 5 DISPLAYS

The LCD display will show a value and some marks under the digits.

Zero: zero indicator
Stable: Stability indicator
Net: Tare indicator, current scales in net weight mode
Bat. Lo: Low battery indicator, charging the battery at once when this indicator on
Kg: current weighing unit is kg
U2: current weighing unit is second weighing unit (setting by F4 UNT)

SECTION 6 OPERATION

6.1 Zeroing The Display

You can press the ZERO key at any time to set the zero point from which all other weighing, within 2% of power up zero. This will usually only be necessary when the platform is empty. When the zero point is obtained the display will show the indicator for zero.

The scale has an automatic rezeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press the ZERO key to rezero the scale if small amounts of weight are shown when the platform is empty.

Note: if current weight more then 20% of capacity, Zero function will disable.

6.2 Taring

Zero the scale by pressing the ZERO key if necessary. The zero indicator will be on.

Place a container on the platform, a value for its weight will be displayed.

Press the TARE/UNIT key to tare the scale. The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The "NET" indicator will be on. As product is added only the weight of the product will be shown. The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.

When the container is removed a negative value will be shown. If the scale was tared just before removing the container this value is the gross weight of the container plus all product that was removed. The zero indicator will also be on because the platform is back to the same condition it was when the ZERO/ENTER key was last pressed.

6.3 Change weighing unit

Hold TARE/UNIT for 4 seconds will change weighing unit, relevant weighing unit mark turn on(kg or u2)

SECTION 7 PARAMETERS & CALIBRATION

7.1 Enter setting mode

The scale has 10 parameters that can be set by the user plus a method of entering the calibration section.

To set parameters or calibration, hold TARE/UNIT key ,then press ON/OFF key ,it will show F0 CAL .

7.2 Calibrate

After enter setting mode, the display will show the first function, "F0 CAL". press TARE/UNIT key, display shows "UNLOAD", empty the platter, after STABLE indicator on, press TARE/UNIT key again, display shows the calibrate weight, you can press ZERO key to select calibrate weight, after you select, press TARE/UNIT key, display shows "LOAD", put the calibrate weight on, after STABLE indicator on, press ZERO key to sure, display shows "SUCC", after T28/T29 selfchecking again, T28/T29 is ready for you.

7.3 Change division

After enter setting mode, the display shows "F0 CAL", press ZERO key, display shows "F1 INC", press TARE/UNIT key to enter, press ZERO key to select division, press TARE/UNIT key to sure, press ZERO key and TARE/UNIT key at the same time to escape.

7.4 Check internal counts

After enter setting mode, display shows "F0 CAL", press ZERO key twice, display shows "F2 INP", press TARE/UNIT key to enter, display shows internal counts, press TARE/UNIT key and ZERO key at the same time to escape.

7.5 Set backlight mode

After enter setting mode, display shows "F0 CAL", press ZERO key three times, display shows "F3 BK", press TARE/UNIT key to enter, press ZERO key change backlight mode(AU: automatic, OFF: off), press TARE/UNIT key and ZERO key at the same time to escape.

7.6 Set unit

After enter setting mode, display shows "F0 CAL", press ZERO key four times, display shows "F4 unt" , press ZERO key to change the second Unit.(g: gram, TL: Taiwanese liang, lb: ounce)

7.7 Set sleep time

After enter setting mode, display shows "F0 CAL", press ZERO key five times, display shows "F5 OFF", press ZERO key to change the time for sleep .(rang 3,5,10,20 minute)

7.8 Change capacity

Before this operate, please short K4

After enter setting mode, display shows "F0 CAL", press ZERO key six times, display shows "F6 CAP", press TARE key, display show "pin---", waiting for input password, press TARE key and ZERO key to input password (TARE key for increase value, ZERO key for move active digit), default password is "315", after input correct password, display will show capacity, press TARE key to change, press ZERO key to sure

7.9 Auto zero range

After enter setting mode, display shows "F0 CAL", press ZERO key seven times, display shows "F7 Azn", press TARE key, the parameters will set the auto zero range.(option: 0.5d/1d/2d/4d)

7.10 Speed

After enter setting mode, display shows "F0 CAL", press ZERO key seven times, display shows "F8 SPEED", press TARE key, the parameters will set weighing speed.(option: 7.5/13/30/60 times).

7.11 Reset

After enter setting mode, display shows "F0 CAL", press ZERO key seven times, display shows "F9 RST", press TARE key, the parameters will set back to the default value(factory mode).

7.12 Gravity

To set gravity, hold TARE/UNIT and ZERO key together, then press ON/OFF key ,it will show GRAV, input the gravity value, then press ZERO key to make sure.

SECTION 8 BATTERY OPERATION

The weighing indicator can be operated from the battery if desired. The battery life is approximately 100 hours. (without backlight)

When the battery needs charging BAT LO indicator will turn on. The battery should be charged when the symbol is on. The scale will still operate for about 10 hours after which it will automatically switch off to protect the battery.

To charge the battery simply plug into the mains power. The scale does not need to be turned on.

The battery should be charged for 24 hours for full capacity.

Just under the quantity display is an LED to indicate the status of battery charging. When the scale is plugged into the mains power the internal battery will be charged. If the LED is green the battery has a full charge. If it is Red the battery is nearly discharged and yellow indicates the battery is being charged.

As the battery is used it may fail to hold a full charge. If the battery life becomes unacceptable then contact your distributor or TAIWANSCALE corporation.

SECTION 9 ERROR CODES

ERROR CODES	DESCRIPTION	RESOLUTION
- -OL -	Over range	Remove weight from the scale. If the problem persist contact your dealer or Taiwan scale for assistance.
Err 4	Zero Setting Error	The scale was outside the normal zero setting range either when it was turned on or when the ZERO key was pressed. Remove weight from the scale and try again. Use the TARE key to set the display to zero value. If the problem persist contact your dealer or Taiwan scale for assistance.
Err 6	A/D out of range	The values from the A/D converter are outside the normal range. Remove weight from the scale if overloaded, make sure the pan is attached. Indicates the load cell or the electronics may be faulty. If the problem persist contact your dealer or Taiwan scale for assistance.

TAIWAN SCALE is a international supplier with more than 30 years experience in the production and sale of electronic weighing equipment.

Products are supplied and serviced from our company locations in the CHINA, TAIWAN and distributed through a world wide dealer network, also we make OEM/ODM products for world wide customer.

TAIWAN SCALE's products are predominantly designed for the laboratory, medical, business and industrial markets.

The product range can be summarised as follows:

- Counting scales for general industrial and warehouse applications
- Digital weighing/check-weighing scales
- High performance platform scales with extensive software facilities including parts counting, percent weighing etc.
- Digital electronic scales for medical use
- Retail price computing scales
- Floor scales
- Truck scale
- Crane scales
- Weighing indicator for platform scales, floor scales and truck scales
- Hand push and pull gauge
- Customize auto weighing systems

TAIWAN SCALE and their distributors offer a full range of technical services such as on site and workshop repair, preventative maintenance and calibration facilities.

TAIWAN SCALE operates an approved quality management system and is certified to ISO9001:2000.

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